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**Kwon et al.**

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(54) **DATA QUALITY ASSESSMENT AND REAL-TIME EVALUATION OF GPS PROBE DATA**

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(57) **ABSTRACT**

Quality assessment of probe data collected from GPS systems is performed by a system and method of determining a value of data points provided by different vendors of such data. Incoming raw probe data is initially analyzed for removal of extraneous data points, and is then mapped to roadway links and smoothed out. The resulting output is processed to determine the coverage value of data provided by a given vendor and enable a comparison between different vendors. Such a model of probe data processing also enables an evaluation of a contribution of further vendors of raw probe data to an existing dataset. Additionally, a real-time performance evaluation of continually-ingested probe data includes building historical and data count profiles, and generating output data represented by a number of data points for a specific distance within a geo-box representing a geographical area, to project a value of raw probe data for a next incremental time period.

**20 Claims, 5 Drawing Sheets**

